REMARKS

On page 3 of the office action dated October 28, 2005, the Examiner makes the following argument (emphasis original):

> As indicated in the Declaration, Mr. Pozin admits that the [sic] after the addition of both the lithium trifluoromethanesulfonate salt and the lithium perchlorate salt into the electrolyte, and before discharge of the cell, the molarity of lithium ions in the electrolyte is equal to the sum of the molarity of perchlorate ions in the electrolyte and the molarity of trifluoromethanesulfonate ions in the electrolyte. It is noted that the scope of the recited subject matter in claim 19 is broader than what is disclosed in the Declaration.

Applicants disagree; the Pozin Declaration plainly proves that applicants had possession of an electrochemical cell covered by claim 19 prior to this amendment. But in the interests of advancing prosecution, applicants have amended claim 19 to require the recited molarity prior to discharge of the cell.

The specification has been objected to under 35 U.S.C. § 132 and claims 19-26, 31, 32, and 34-36 rejected under 35 U.S.C. § 112, ¶ 1. Applicants request that the objection and rejection be reconsidered and withdrawn, for the following reasons.

Claims 19-26, 31, 32, and 34-36 cover a primary electrochemical cell including a cathode containing an aluminum current collector, an anode, and an electrolyte containing a lithium perchlorate salt and a lithium salt selected from lithium trifluoromethanesulfonate, lithium trifluoromethanesulfonimide, and lithium hexafluorophosphate. Prior to discharge of the electrochemical cell, the molarity of lithium ions in the electrolyte is equal to the sum of the molarity of perchlorate ions in the electrolyte and the molarity of trifluoromethanesulfonate ions, trifluoromethanesulfonimide ions, or hexafluorophosphate ions in the electrolyte.

Applicants submitted a Declaration of Michael Pozin Under 37 C.F.R. § 1.132 ("the Declaration") with the previous Reply. Mr. Pozin has worked in the battery field for over 20 years. The Declaration shows that the specification as filed actually does disclose the above limitation. In particular, Mr. Pozin explains:

> 3. I have reviewed the above-identified patent application, which describes the following electrochemical cell:

Referring to Fig. 1, an electrochemical cell 10 includes an anode 12 in electrical contact with a negative lead 14, a cathode 16 in electrical contact with a positive lead 18, a separator 20 and an electrolytic solution. Anode 12, cathode 16, separator 20 and the electrolytic solution are contained within a case 22. The electrolytic solution includes a solvent system and a salt that is at least partially dissolved in the solvent system.

Cathode 16 includes an active cathode material, which is generally coated on the cathode current collector. The current collector is generally titanium, stainless steel, nickel, aluminum, or an aluminum alloy, e.g., aluminum foil. The active material can be, e.g., a metal oxide, halide, or chalcogenide; alternatively, the active material can be sulfur, an organosulfur polymer, or a conducting polymer. Specific examples include MnO_2, V_2O_5, CoF_3, MoS_2, FeS_2, $SOCl_2$, MoO_3, S, $(C_6H_5N)_n$, $(S_3N_2)_n$, where n is at least 2. The active material can also be a carbon monofluoride. An example is a compound having the formula CF_x, where x is 0.5 to 1.0. The active material can be mixed with a conductive material such as carbon and a binder such as polytetrafluoroethylene (PTFE). An example of a cathode is one that includes aluminum foil coated with MnO_2. The cathode can be prepared as described in U.S. Patent No. 4,279,972.

Anode 12 can consist of an active anode material, usually in the form of an alkali metal, e.g., Li, Na, K, or an alkaline earth metal, e.g., Ca, Mg. The anode can also consist of alloys of alkali metals and alkaline earth metals or alloys of alkali metals and Al. The anode can be used with or without a substrate. The anode also can consist of an active anode material and a binder. In this case an active anode material can include carbon, graphite, an acetylenic mesophase carbon, coke, a metal oxide and/or a lithiated metal oxide. The binder can be, for example, PTFE. The active anode material and binder can be mixed to form a paste which can be applied to the substrate of anode 12.

Separator 20 can be formed of any of the standard separator materials used in nonaqueous electrochemical cells. For example, separator 20 can be formed of polypropylene, (e.g., nonwoven polypropylene or microporous polypropylene), polyethylene, and/or a polysulfone.

The electrolyte can be in liquid, solid or gel (polymer) form. The electrolyte can contain an organic solvent such as propylene carbonate (PC), ethylene carbonate (EC), dimethoxyethane

> (DME), dioxolane (DO), tetrahydrofuran (THF), acetonitrile (CH_3CN), gamma-butyrolactone, diethyl carbonate (DEC), dimethyl carbonate (DMC), ethyl methyl carbonate (EMC) dimethylsulfoxide (DMSO) methyl acetate (MA), methyl formiate (MF), sulfolane or combinations thereof. The electrolyte can alternatively contain an inorganic solvent such as SO_2 or $SOCl_2$. The electrolyte also contains a lithium salt such as lithium trifluoromethanesulfonate (LiTFS) or lithium trifluoromethanesulfonimide (LiTFSI), or a combination thereof. Additional lithium salts that can be included are listed in U.S. Patent No. 5,595,841, which is hereby incorporated by reference in its entirety. In some embodiments, the electrolyte may contain $LiPF_6$; in other embodiments, the electrolyte is essentially free of $LiPF_6$. The electrolyte also contains a perchlorate salt, which inhibits corrosion in the cell. Examples of suitable salts include lithium, barium, calcium, aluminum, sodium, potassium, magnesium, copper, zinc, ammonium, and tetrabutylammonium perchlorates. Generally, at least 500 ppm by weight of the perchlorate salt is used; this ensures that there is enough salt to suppress corrosion. In addition, less than about 20,000 by weight of the perchlorate salt is generally used. If too much perchlorate salt is used, the cell can be internally shorted under certain conditions during use. (Application, page 4, line 10 — page 5, line 22.)

When lithium perchlorate, lithium trifluoromethanesulfonate, lithium trifluoromethanesulfonimide, and/or lithium hexafluorophosphate are the only lithium and/or perchlorate salts that have been added to the electrolyte, the molarity of lithium ions in the electrolyte of this cell prior to discharge can be equal to the sum of the molarity of perchlorate ions in the electrolyte and the molarity of trifluoromethanesulfonate ions, trifluoromethanesulfonimide ions, or hexafluorophosphate ions in the electrolyte.

4. Additionally, several of the electrochemical cells in Example 1 of the above-identified patent application were prepared by adding a lithium perchlorate salt to an electrolyte that included a lithium trifluoromethanesulfonate salt. (See Application, page 6, line 8 — page 8, line 30.) After the addition of both the lithium trifluoromethanesulfonate salt and the lithium perchlorate salt into the electrolyte, and before discharge of the cell, the molarity of lithium ions in the electrolyte was equal to the sum of the molarity of perchlorate ions in the electrolyte and the molarity of trifluoromethanesulfonate ions in the electrolyte. (Declaration of Michael Pozin Under 37 C.F.R. § 1.132, pages 1-2.)

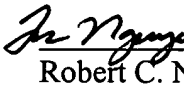
In view of the amendment to claim 19 and the explanation provided in particular by Mr. Pozin, Applicants request that the objection to the specification under 35 U.S.C. § 132, and the rejection of claims 19-26, 31, 32, and 34-36 under 35 U.S.C. § 112, first paragraph, be withdrawn.

At least for the reasons provided above, Applicants believe that claims 19-26, 31, 32, and 34-36 are in condition for allowance, which action is requested.

Enclosed is a $1,020.00 check for the Petition for Extension of Time fee. Please apply any other charges or credits to deposit account 06-1050.

Respectfully submitted,

Date: April 26, 2006



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